



Wireless Telecommunications Approval Requirements for Australia



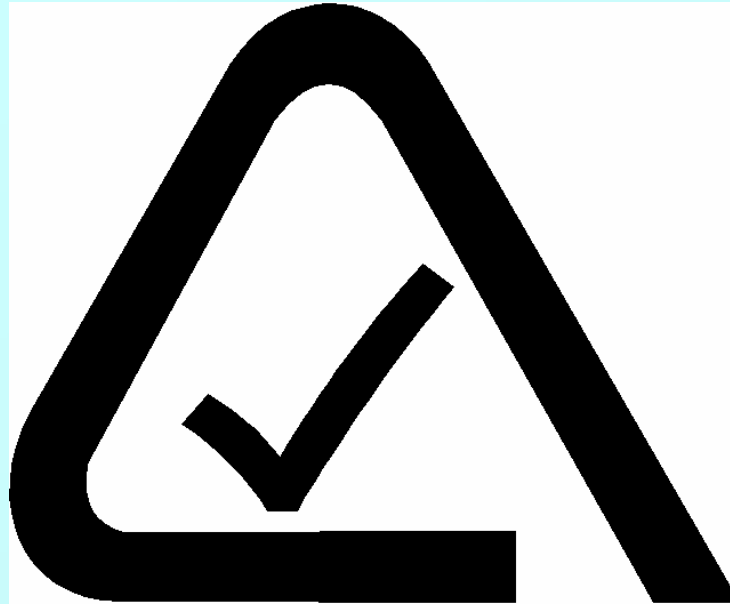
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Wireless Telecommunications Approval Requirements for Australia



GSM – CDMA – WCDMA – DECT- Cordless



GSM



GSM Handset - Applicable Standards

- Certification, testing & report to the following:
 - **ACA TS018-1997** – GSM Telecommunications Equipment (including Australian requirements).
Testing is required for proof of compliance to ACA TS018.
Note: ACA TS018 to be replaced by AS/ACIF S042.3.
 - **AS/NZS60950** – Safety of Information Technology Equipment
Applies to handset
 - **EMR Standard 2003** - Human Exposure to RF.
 - SAR to EN50361 (devices used at the ear)
 - SAR to ACA EMR Standard Schedule 2
for devices not used at the ear. ie. body worn



GSM- Documentation Requirements

- Full copy of a test report to the applicable versions of
 - GCF-CC (Global Certification Forum)
or ETSI EN300 607-1 (GSM phase 2+ 900/1800)
or ETSI EN301 511 (GPRS, GSM 900/1800)
or an approval to connect from the Australian carrier
- Copy of User manual
- Details of Manufacturer
- IMEI integrity attestation
- Details of Software version of telephone being supplied
- Details of manufacturer's model number
- Details of market model number



GSM – Approval Requirements ACA TS 018

- Labelling Notice Schedule 1, Category A24 has three testing and reporting requirements for ACA TS018.
- Interoperability and integrity testing to ACA TS018 is compliance Level 3.
- Safety to ACA TS001 may also apply e.g. Modem modules mounted in equipment and for desk top units.



GSM – Approval Requirements ACA TS 018

Schedule 1, Category A24 – other requirements.

- Compliance Level 2 applies to the differences to GSM standards for :
 - **Emergency dialling “000 & 112”**
 - **Ignition of flammable atmospheres (Notice to users).**
- Compliance Level 1 applies to IMEI integrity
- Reports must exist for all Category A24 requirements.



GSM – Approval Requirements Certification Body

- ACA TS018 interoperability and integrity testing are exempt if EU Type Approval is available.
- If a Recognised Testing Authority (RTA) test report or EU Type Approval certificate is not available, certification by a ACMA “Certification Body” is required
- This the most common approach to approvals of GSM handsets.



What is a Certification Body?

- A body which has been granted the authority by the Approving Body (the ACA/ACMA) to issue Statements of Compliance against the Telecommunications Act 1997 section 376 Technical Standards.



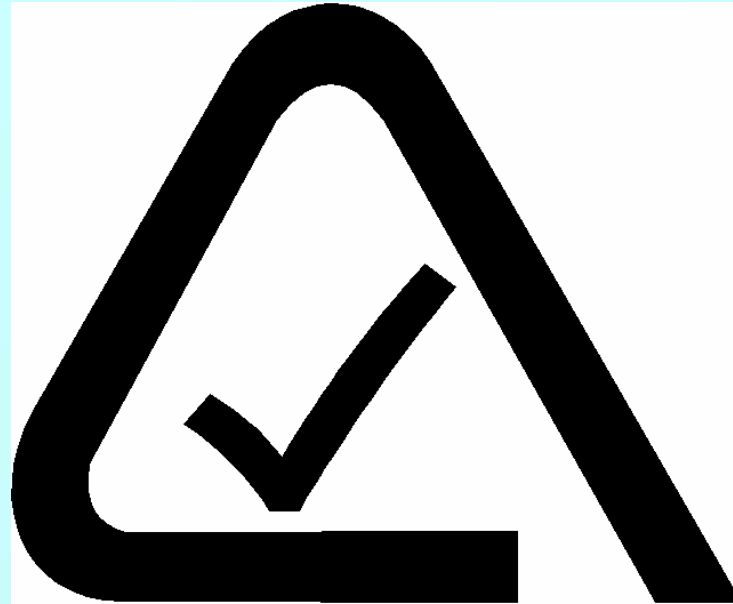
Statements of Compliance by a Certification Body

- A Certification Body may only issue a Statement of Compliance:
 - in accordance with the Telecommunications Labelling Notice (TLN) and the ACA guidelines; and
 - against standards or parts thereof, covered by the scope of determination by the approving body.



What is a Recognised Testing Authority (RTA) ?

- Telecommunications equipment classified as **compliance level 3** in the Australian Communications and Media Authority's (ACMA) Labelling Notice 2001 as amended June 2005 must be tested for compliance against the relevant standards by a **Recognised Testing Authority**.
- To be an RTA, a laboratory must have one or more of the AS/ACIF standards or former ACA Technical Standards identified in its scope of accreditation.
- Current RTA list: www.nata.asn.au
- Check RTA scope and check exclusions



CDMA



Applicable Standards

Certification, testing and report to the following ACMA & Australian standards for CDMA products:

- **AS/ACIF S042.1 & AS/ACIF S042.2** – CDMA Telecommunications Equipment (including Australia requirements).
 - Testing will be required for proof of compliance to AS/ACIF S042.1 & AS/ACIF S042.2



Applicable Standards cont.

- **AS/NZS 60950** – Safety of Information Technology Equipment (may apply depending on the product)
- **AS/ACIF S003** – PABX connected to PSTN (if a Plain Ordinary Telephone Service (POTS) port is provided)
- **AS/ACIF S008** – Requirements for Authorised Cabling Products (if telecom line cords are supplied)



CDMA - Documentation Requirements

- Copy of FCC certificate under 47 CFR2.1 & 22.1 & test reports to:
 - IS-95A (IS-98 testing
 - *or* an approval to connect from the Australian carrier
- Copy of User manual
- Details of Manufacturer
- Details of Software version of compliant telephone being supplied
- Details of manufacturer's model number
- Details of market model number



CDMA-Approval Requirements

- Telecoms Labelling Notice (TLN) has testing & reporting requirements for CDMA devices.
- Schedule 1, Category A39 requires test reports to AS/ACIF S042.1 & AS/ACIF S042.2.
- Schedule 7, Item 5 gives exemption of interoperability and integrity testing to AS/ACIF S042.2 with the provision of FCC approvals AND approval to connect by carrier.



CDMA – AS/ACIF S042.1

Clause 5.1 – Requirements

- **5.1.1 Emergency Calling,**
 - Customer Equipment must support emergency dialling number “000”.
 - Customer Equipment should not prevent access to emergency numbers specified by the ACMA
 - Mains power Customer Equipment should continue to support emergency dialling for at least 30 minutes after loss of mains power.



CDMA – AS/ACIF S042.1

5.1.2 – Ignition of flammable material

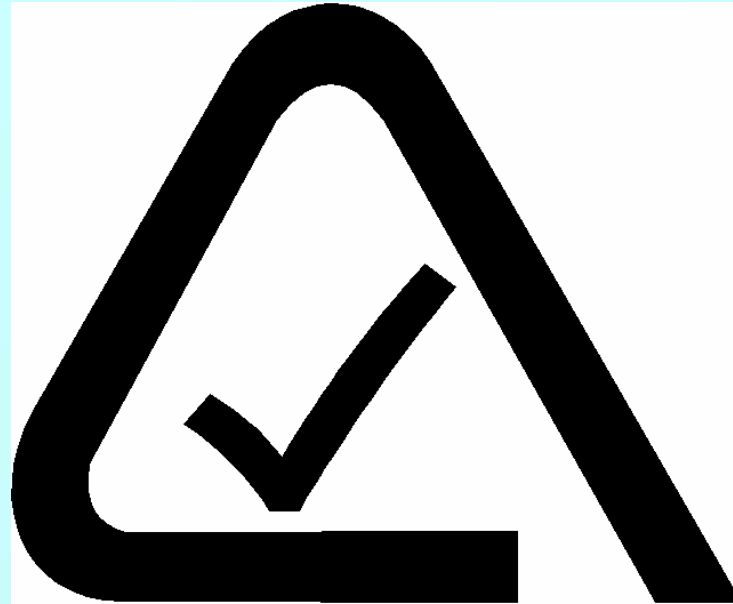
- Customer Equipment capable of producing electromagnetic radiation with a RF ignition hazard for gases and vapours shall be accompanied by a written warning for the user.
- Written warnings are usually included in the user manual.



CDMA – AS/ACIF S042.2

Clause 5.1 – Requirements

- CDMA Customer Equipment shall comply with TIA/EIA IS-95 [4].
- Compliance shall be verified with testing & test reports or certification by an ACMA Certification Body
- Compliance Level 2.



W- CDMA



WCDMA- Applicable Standards

Certification, testing and report to the following ACMA & Australian Standards for WCDMA products:

- **AS/ACIF S042.1** – Requirements for connection to an air interface of a telecommunications network – Part 1 General. (Testing will be required for proof of compliance to AS/ACIF S042.1)
- **AS/NZS 60950** – Safety of Information Technology Equipment (may apply depending on product)



WCDMA -Applicable Standards

- **AS/ACIF S003** – PABX connected to PSTN if a Plain Ordinary Telephone Service (POTS) port is provided
- **AS/ACIF S008** – Requirements for Authorised Cabling Products (if telecoms line cords are supplied)

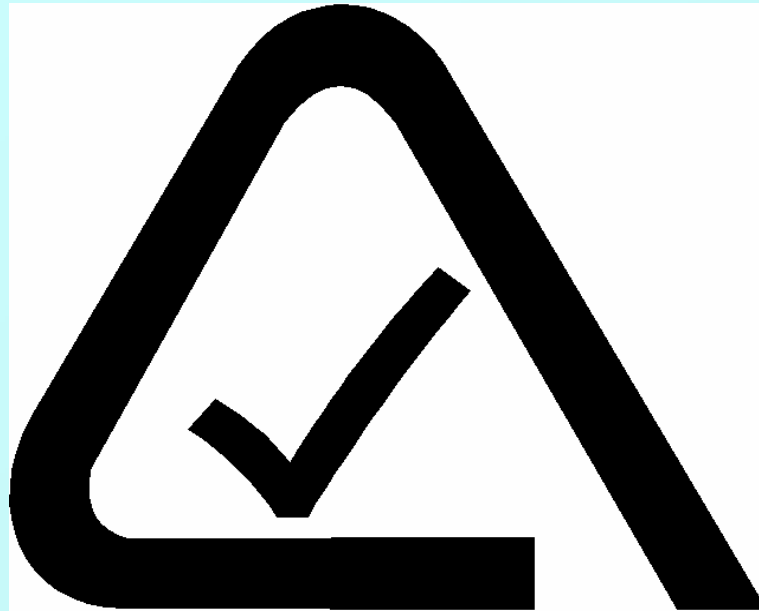
WCDMA - Documentation Requirements



- Copy of *3GPP* or *ETSI* interoperability test reports or an approval to connect from the Australian carrier
- Copy of User manual
- Details of Software version of compliant telephone being supplied
- Details of manufacturer's model number
- Details of market model number



DECT , PHS & CT2





DECT , PHS & CT2

- Testing to ACA TS 028, TS 034 & TS019 is compliance level 2.
- Generally compliance is by way of a technology test report that is Certified by a Certification Body such as Comtest Laboratories.
- ACA TS001 may apply to devices which are mains powered or of a desk top construction.



DECT , PHS & CT2

- Schedule 7 – Recognised Type Approvals replacing the ACMA integrity and interoperability requirements :
 - DECT : European Type Approval
 - PHS : Japanese Approvals fro JATE & MKK
 - CT2 : European Type Approval
- ACMA Site Licence could apply for some cases.



PSTN Cordless Handset

- Traditional Cordless Telephones (Low Frequency) & Spread Spectrum Cordless Telephones.
- Required to meet the requirements of Schedule 1, Category A1 – **ACA TS001, ACA TS 002 & ACA TS004.**
- RF Requirements to AS/NZS 4821.
- EMC & EMR (SAR) requirements apply.



Other Requirements

- **EMC**
 - Charger , Accessories, Car Kits
- **Human Exposure to RF**
 - EMR, SAR
 - Body Worn SAR applicable for Hands Free Kit
- **Safety**
 - Power adapters/Chargers, Handset



Electromagnetic Compatibility

- **AS/NZS CISPR22 (EN55022)**

Interference Characteristics of Information Technology Equipment (may apply depending on the product)



- C-tick mark not to be used for Telecoms devices
- Charger and accessories may be C-ticked





Human Exposure to RF



- **The Radiocommunications (Electromagnetic Radiation (EMR) -Human Exposure) Standard 2003 (EMR Standard 2003)**
 - “Standard” sets limits for human exposure to EMR from specified mobile/portable Radiocommunications Transmitters
 - Created by Australian Communications Authority
 - Specifies ARPANSA (ICNIRP) Limits
 - Defines 3 SAR test methods



Human Exposure to RF



- **The Radiocommunications (Compliance Labelling-Electromagnetic Radiation) Notice 2003**

- (EMR Labeling Notice)**

- Register with ACA to use compliance mark
 - record keeping, supporting documentation
 - Testing and report requirements
 - Laboratory accreditation
 - Compliance levels
 - Labeling requirements
 - Declaration of Conformity (DoC)





Specific Absorption Rate (SAR) Limits

Based on ICNIRP

	Controlled / Occupational	Uncontrolled / General Public
Whole Body Averaged SAR	0.4 W/kg	0.08 W/kg
Spatial peak -Head & Torso	10 W/kg	2 W/kg
Spatial peak -Limbs	20 W/kg	4 W/kg

SAR measured in a 10 gram cube of tissue



ACA EMR Standard 2003



Assessment method for devices exceeding power threshold

User Position	Applicable Frequency Range	ACA Evaluation Method
> 20 cm from Human Body	300 kHz to 100 GHz	Power density or Field Strength Reference Level measurements - EMR Meter AS2772.2
< 20 cm from Human Body	150 MHz – 5800 MHz	SAR measurements Push-to-Talk / Body Worn devices – -SAR per Schedule 2
Close Proximity to Human Ear	300 MHz – 3000 MHz	SAR Measurements at the ear Mobile/Portable Phones - -SAR per Schedule 2 or EN50361
< 2.5 cm from Human Body	300 kHz-100 GHz	SAR test, or if less than 20 mW, - complies without testing





Applicable SAR Tests

- Body worn SAR tests applicable for Hands Free Kits
- Applicable for devices not used at the ear
- Test house must be accredited to **ACA EMR Standard Schedule 2 and EN50361**



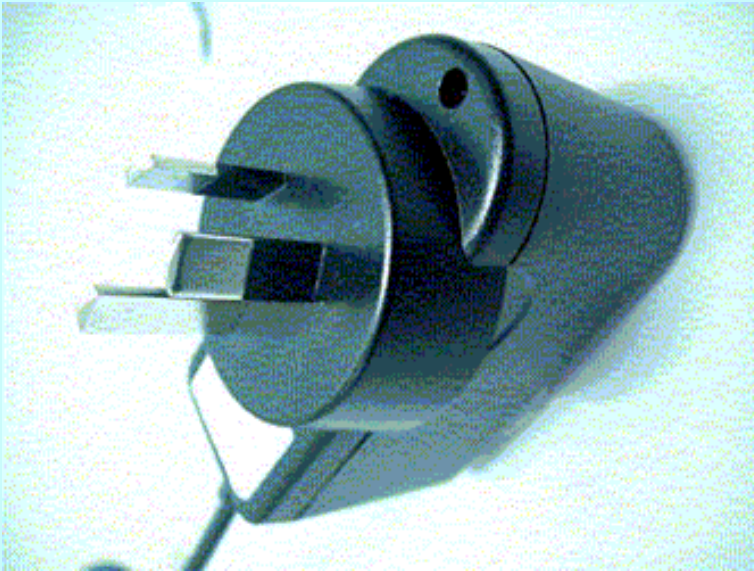
Safety Requirements

- Power Adapter and Plug Packs generally fall outside of the ACMA (federal) safety requirements.
- These devices are considered “Prescribed Items” and must obtain Electrical Authority Approval. (state government)
- AS/NZS 60950 (EN 60950)
 - Switch mode Charger
- AS/NZS 3108
 - Transformer Power Adapters



Insulated Single Phase Mains Pins

It is mandatory for Insulated Pins to be fitted to all single phase mains powered devices supplied in Australia by April 2005





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